

ASAP4008

HOSE AND HOSE CONDUIT
GUIDELINES FOR FILING APPLICATIONS FOR ACCEPTANCES FROM THE MINE
SAFETY AND HEALTH ADMINISTRATION (MSHA) FOR PRODUCTS FOR USE IN
UNDERGROUND MINES

The following items must be supplied to MSHA in your initial application for product acceptance. It is recommended that the information provided to MSHA be presented in the following order and with the paragraphs numbered as shown (10.1, 10.2, etc.) to correspond to the number of the Check List at the end of MSHA's "Interim Fire and Toxicity Criteria for Acceptance of Products Taken into Underground Mines, Draft No. 2," of March 22, 1977. An example prepared in this manner is attached.

10.1 Provide application number

Each application should be identified by a code number assigned by the applicant. The code number shall be 6 numeric digits or less and be placed on the initial application and on all samples, subsequent correspondence, documents, drawings, and bills of materials. Different numbers should be assigned to each application. Documents received without an identifying number will be returned to the sender. (Interim Criteria of March 22, 1977, 2.1.2.)

10.2 Identify and describe the product

A form is attached which is recommended for use in describing the product being submitted. In addition to the form, special service application information should be provided as well as any special techniques required of a purchaser by the manufacturer. (Interim Criteria of March 22, 1977, 3.1 and 3.2.)

10.3 Provide information on the compounds in the product.

The compound ingredients are to be identified and quantified in accordance with the MSHA modification and Addendum of Section 3.3., Formulations, Interim Fire and Toxicity Criteria, dated March 22, 1977. Effective June 4, 1979. Three options are given; only one is to be used with each application. Be sure to specify whether method a, b, or c is used.

- a. Specify each ingredient by its chemical name along with its percentage (weight) and tolerance of percentage range. Organic ingredients should be named according to the current rules of the International Union of Pure

and Applied Chemistry. Inorganic ingredients should be named according to the Chemical Abstract of the American Chemical Society.

- b. Specify each fire retardant ingredient by its chemical or generic name with its percentage and tolerance or percentage range or its minimum percent. List each flammable ingredient by chemical, generic, or trade name along with the TOTAL percentage of all flammable ingredients. List each inert ingredient by chemical, generic, or trade name along with the TOTAL percentage of all inert ingredients. In addition, the product formulation with percentages and tolerances should be kept on file by the applicant. The formulation shall be available to MSHA at the applicant's premises upon request should a product be involved in a mine accident, incident, or quality assurances check.
- c. Specify each fire retardant ingredient by its chemical or generic name with its percentage and tolerance or percentage range or its minimum percent. List all other ingredients. A flame test quality assurance program subject to acceptance by the Approval and Certification Center, Materials and Explosives, should also be provided to maintain the accepted flame resistance level of the product. The flame test program should be maintained and documented as long as the product is made and acceptance is in effect. The flame test records should be available for examination by MSHA personnel. In addition, the product formulation with percentages and tolerances should be available to MSHA at the applicant's premises upon request should a product be involved in a mine accident, incident, or quality assurance check.

Changes in Composition of Accepted Products and Extensions

MSHA Approval and Certification Center, Materials and Explosives, may request specific formulation information (name of ingredient(s) with percentage and tolerances) and/or test data, if an applicant is requesting a change in composition of an accepted product or requesting an extension. The request by MSHA will be to determine if the change increases the flammability or toxicity of the product.

10.4 Flammability testing

Provide flammability test data if the hose is covered by the Interim Criteria. Hose samples submitted for acceptance

under 30 CFR, Part 18, Section 18.65 will be tested by MSHA, in which case flammability test data are not required from the applicant. (Interim Criteria of March 22, 1977, 6.4.)

10.5 Provide the specified toxicity information

The applicant should provide information on the toxicity of the finished product including inhalation, ingestion, skin, eye, sensitization, carcinogenic hazards. A toxic product is a finished product or material capable of causing bodily harm to an average individual by chemical action. The toxicity hazard should be under "normal use conditions." (Interim Criteria of March 22, 1977, 7.0.)

Hose and Hose Conduit

10.6 Provide information on the proposed branding of the product. (Interim Criteria of March 22, 1977, 9.6.)

Hose and hose conduit submitted under 30 CFR 18.65 and accepted by MSHA as flame-resistant shall be marked as follows: Impressed letters, raised letters on depressed background, or printed letters with the words "Flame-Resistant. USMSHA No. --" at intervals not exceeding 3 feet. This number will be assigned to the manufacturer after the sample has passed the tests. For all hose and hose conduit larger than 3/8 inch I.D., the letters and numbers shall be at least 1/4 inch high. For hose 3/8 inch I.D. and under, the letters and number shall be at least 1/3 inch high.

Hose submitted only under the Interim Criteria shall be marked "MSHA No. --". This number will be assigned to the manufacturer by MSHA.

Multiple use hose submitted under both 30 CFR 18.65 and the Interim Criteria shall be marked "Flame-Resistant, USMSHA No. --". This number will be assigned to the manufacturer by MSHA.

NOTE: When acceptance is granted, supply a product sample showing the complete brand.

10.7 Provide information on the quality assurance program.

Applications should provide the details with which the applicant intends to maintain compliance with criteria. MSHA will indicate acceptance of the quality assurance program once for each manufacturing plant but reserves the right to monitor in-plant processes, review records, and interview employees with respect to the plan. Any changes

affecting flammability or toxicity in the quality assurance program will require re-approvals by MSHA. The quality assurance program shall include:

- Procurement procedures for the components of the product.
- Manufacturing practices to maintain the formulation.
- Procedures for record keeping.

(Interim Criteria of march 22, 1977, 3.0)

If option c. of 3.3 of the Interim Criteria is used for Formulation, details of a flame test control program must be included as part of a quality assurance program.

If your quality assurance program was previously accepted by MSHA, include a copy of the MSHA letter accepting it.

NOTE: Include a statement on confidentiality. The following is given as an example:

The material contained in this specification is considered to be confidential commercial information and/or trade secrets as covered by federal law (5 USC 552(B)(4)) and is exempt from disclosure requirements of the Freedom of Information Act (5 USC 552).

APPLICATION FORM

10.2 Hose or Hose Conduit Product Description

Acceptance requested according to (check appropriate space(s):

_____ 30 CFR 18.65 or _____ Interim Criteria

Date _____

Telephone _____

Manufacturer

Address

Application Number _____

Check one:

_____ This is a new application

_____ a request for an extension (include a photocopy of
any prior acceptance letters from MSHA)

Manufacturer's Product Trade Name and/or I.D. No.

End Use Designation:

_____ Fire Suppression _____ Fire Hose _____ Hose Conduit

_____ Other (specify) _____

For FIRE HOSE complete only following:

Tube (Inner Liner): Compound Designation No. _____ Thickness _____

For FIRE SUPPRESSION HOSE AND OTHER HOSE complete only the following:

Cover: Compound Designation No. _____ Minimum Thickness _____

For HOSE CONDUIT complete all the following information:

Cover: Compound Designation No. _____ Minimum Thickness _____

Hose Conduit Wall Gauge (3/16/" minimum): _____

Tube (Inner Liner): Compound Designation No. _____ Thickness _____

Reinforcement:

Type:

_____ Braided _____ Wrapped Fabric _____ Spiral

Other (specify) _____

Material:

_____ Textile _____ Wire

Fabric Reinforcement Details:

Textile(s) Warp _____ Weft (fill) _____

Fabric Weight (oz./sq. yd. - Max.) _____

Fabric Treatment _____

No. of Plies _____ Adhesion Gum Designation No(s). _____

Braided, Spiral, or Other Reinforcement Details:

Material Type _____

Weight (yds/lb.; ft./lb.) _____

No. of Plies _____ Adhesion Gum Designation No(s). _____

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SPECIFICATION FOR HOSE AND HOSE CONDUIT TEST SAMPLES

- A. For application for acceptance under 30 CFR 18.65:

Submit six cut-to-size test specimens as follows:

Fire suppression hose: cover material only

Fire hose: tube material only

Hose conduit: complete wall section

Samples shall be ½" wide by 6" long and as near specification gauge as possible. Identify each sample with the application number.

For hose conduit, also submit a 3 foot long complete hose section.

- B. For applications for acceptance under the Interim Criteria:

1. Conduct flame tests as described in 30 CFR 18.65.
2. Submit a copy of the actual laboratory flame testing report with the application.

Samples shall be ½" wide by 6" long and as near specification gauge as possible. Identify each sample with the application number.

HOSE AND HOSE CONDUIT
EXAMPLE OF A TYPICAL APPLICATION

This application is being submitted in accordance with CFR 30 and MSHA's "Interim Fire and Toxicity Criteria for Acceptance of Products Taken into Underground Mines, Draft No. 2," March 22, 1977, as modified by MSHA's Addendum effective June 4, 1979.

10.1 Identification Number: 790424

10.2 Product Description: Never Tear Hose Conduit, as described in the attached product description sheet 10.2

10.3 Ingredients: Method c. of 3.3 in the Interim Criteria is used. Flame retardant ingredient quantities shown as minimum percent of total weight.

Compound 98765:

Styrene Butadiene rubber

Zinc Oxide

Stearic Acid

Sulfoblast accelerator

Sulfur

Petrowax - 6.0% minimum

Antimony Oxide - 3.0% minimum

Furnace black

Para-phenylene diamine antioxidant

Compound 98763:

Styrene Butadiene rubber

Zinc Oxide

Stearic Acid

Sulfoblast accelerator

Sulfur

Petrowax - 6.0% minimum

Antimony Oxide - 3.0% minimum

Thermal black

Para-phenylene diamine antioxidant

Compound 98764:

Styrene Butadiene rubber

Zinc Oxide

Stearic Acid

Sulfoblast accelerator

Sulfur

Petrowax - 6.0% minimum

Antimony Oxide - 3.0% minimum

Furnace black

Para-phenylene diamine antioxidant

Phenolic resin

10.4 Flammability test data (Attach laboratory test report if submitted only under the Interim Criteria; optional if submitted under 30 CFR 18.65.)

Flame - 7 sec. (Avg.)
Glow - 10 sec. (Avg.)

- 10.5 Toxicity: This hose conduit as described above will be branded never Tear Hose Conduit, Flame-Resistant, USMSHA No. x. The "x" will be the number assigned by MSHA following acceptance of the application.
- 10.6 Quality Assurance Program: The Polymeric Rubber Company hose quality control manual was submitted to MSHA with Application No. 780302, dated March 2, 1978, and was subsequently accepted. A copy of the original letter of acceptance by MSHA is enclosed. This quality assurance program, still in effect, will be applied in the manufacture of Never Tear Hose Conduit.

10.2 Hose or Hose Conduit Product Description

Acceptance requested according to (check appropriate space(s)):

Criteria ☒ 30 CFR 18.65 ☒ Interim

Date April 26, 1979 Telephone
(301)-555-2222

Manufacturer Polymeric Rubber
Co.

Address 345 Slone St. Ogden, Utah
90753

Application Number 790424

Check one:

☒ This is a new application
☐ a request for an extension (include a
photocopy of
any prior acceptance letters from MSHA)

Manufacturer's Product Trade Name and/or I.D. No.

Never Tear Hose Conduit

1 1/2", 1 1/4", 2", 3", 4"

End Use Designation:

☐ Fire Suppression ☐ Fire Hose
☒ Hose Conduit

☐ Other (specify)

For FIRE HOSE complete only following:

Tube (Inner Liner): Compound Designation No.

NA Thickness NA

For FIRE SUPPRESSION HOSE AND OTHER HOSE complete only the following:

Cover: Compound Designation No. NA Minimum
Thickness NA

For HOSE CONDUIT complete all the following information:

Cover: Compound Designation No. 98765 Minimum
Thickness 1/3"

Hose Conduit Wall Gauge (3/16/" minimum):
0.203"

Tube (Inner Liner): Compound Designation No.
98764 Thickness 0.20"

Reinforcement:
Type:

Spiral _____ Braided X Wrapped Fabric _____

Other (specify) _____

Material:

X Textile _____ Wire

Fabric Reinforcement Details:

Textile(s) Warp Polyester Weft (fill)
Polyester

Fabric Weight (oz./sq. yd. - Max.) 20 Min., 30
Max.

Fabric
Treatment RFL

No. of Plies 2 Adhesion Gum Designation
No(s). 98763

Braided, Spiral, or Other Reinforcement Details:

Material Type
NA

Weight (yds/lb.; ft./lb.)
NA

No. of Plies NA Adhesion Gum Designation
No(s). NA

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